## (19) World Intellectual Property Organization International Bureau





(43) International Publication Date 24 February 2005 (24.02.2005)

**PCT** 

## (10) International Publication Number WO 2005/016610 A3

(51) International Patent Classification<sup>7</sup>:

B28D 1/02

(21) International Application Number:

PCT/US2004/026316

(22) International Filing Date: 13 August 2004 (13.08.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/495,148

14 August 2003 (14.08.2003) US

- (71) Applicant (for all designated States except US): DIA-MOND INNOVATIONS, INC. [US/US]; 6325 Huntley Road, Worthington, Ohio 43085 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): JAKOBUSS, Markus [DE/US]; 360 Nature Trail, Westerville, Ohio 43082 (US). KUEHN, Andre [DE/DE]; Alter Darmstaeder Weg 11, 64380 Rossdorf (DE). PROSKE, Kurt [DE/DE]; Lerchenweg 8, 63303 Dreieich-Dreieichenhain (DE). TURNER, Dennis W. [US/US]; 4319 Blue River Court, Gahanna, Ohio 43230 (US). HAYDEN, Stephen, C. [US/US]; 15323 Hartford Road, Sunbury, OH 43074 (US).
- (74) Agents: SINGER, James M. et al.; Pepper Hamilton LLP, One Mellon Center, 50th Floor, 500 Grant Street, Pittsburgh, Pennsylvania 15219 (US).

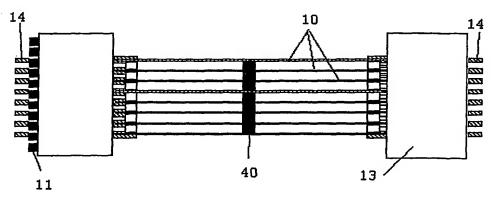
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 29 December 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SYSTEM AND METHOD FOR CUTTING GRANITE OR SIMILAR MATERIALS



(57) Abstract: An improved frame saw system has multiple blades for cutting slabs of masonry materials. The improved systems and methods allow for cutting masonry materials into slabs having surface small deviations. A frame saw system may include a support structure of unifying material bonded to at least one of the blades for keeping the blades in fixed relative positions. The support structure may be removable from the frame saw system as the blades are engaged in a swinging motion cutting into the block. In addition, a process for cutting masonry blocks of granite, marble, rock, and the like, includes pretreating the surface of the block with a skim coat to fill surface irregularities prior to cutting operations. A frame saw system may contain one or more spacers between the saw blades wherein a compressive force is applied across the blades connected to a frame to reduce deflection of the blades while cutting.